



Worker Safety and Health Enforcement Program Update and Case Review

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Overview



- Enforcement Activities
- Enforcement Lessons Learned
- Takeaways
- Program Update
- *Enforcement Process Overview* Survey Results



Worker Safety and Health Enforcement Activities May 2010 - Present



Contractor/Site	Event	Enforcement Activity
Battelle Pacific Northwest National Laboratory	Inadvertent weapons discharge	Enforcement Letter
Sandia Corporation Sandia National Laboratories	Inadvertent ignition of a rocket motor	PNOV
Bechtel Jacobs Company East Tennessee Technology Park	Electrical arc	PNOV
Washington Closure Hanford Hanford	Worker fall	PNOV
Savannah River Nuclear Solutions Savannah River Site	Nitric Acid Spill and Electrical Arc	PNOV
Parsons Infrastructure and Technology Savannah River Site	Crane Lubrication – Hand Injury	PNOV
Los Alamos National Security Los Alamos National Laboratory	Electrical shock	PNOV
Lawrence Livermore National Security Lawrence Livermore National Laboratory	Beryllium Program deficiencies	Consent Order
National Security Technologies Nevada National Security Site	Flash fire	Enforcement Letter



Battelle / Pacific Northwest National Laboratory



Inadvertent firearms discharge





Battelle / Pacific Northwest National Laboratory



Inadvertent firearms discharge

- Battelle training session at HAMMER - a student inadvertently discharged a loaded firearm during a weapons demonstration
- Multi-contractor arrangement
- Battelle performed comprehensive causal analysis
- Potential Part 851 violations:
 - Worker safety and health program coordination and implementation
 - Hazard assessment and abatement
 - Firearms safety program
- Corrective actions address potential violations
- Enforcement Letter issued May 20, 2010



Sandia National Laboratories

Inadvertent ignition of a rocket motor





Sandia National Laboratories

Inadvertent ignition of a rocket motor



- Premature ignition of a test package from a stray current resulted in worker injury
- Multi-contractor work activity
- Type B accident investigation by NNSA
- NNSA issued PNOV on June 1, 2010, citing performance incentive decrement in lieu of civil penalty
 - Explosives hazard identification and assessment
 - Explosives hazard prevention and abatement
 - Training and information
 - General requirements
- Violations reference the *DOE Explosives Safety Manual*, Attachment 2, Contractor Requirements Document
- Corrective actions address violations



Bechtel Jacobs Company

Electrical Arc





Bechtel Jacobs Company

Electrical Arc

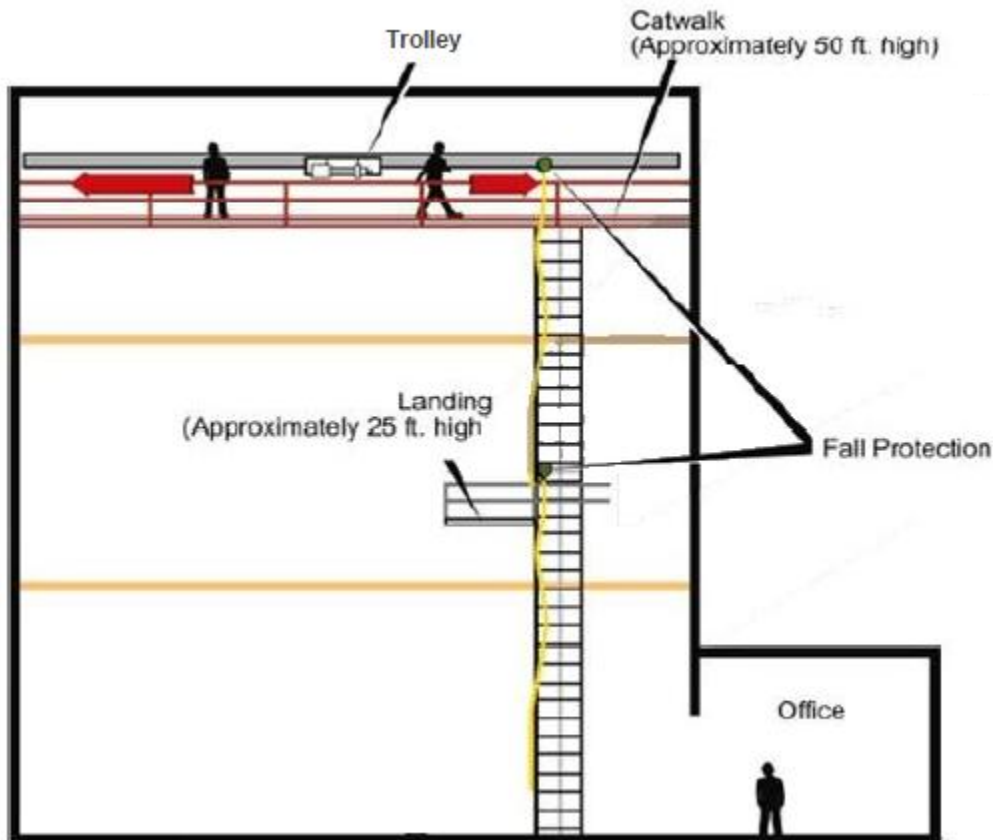


- Near miss to electrocution and arc flash burns when worker enters an energized high voltage electrical cabinet
- Thorough and timely investigation by BJC
- PNOV issued July 16, 2010
 - Electrical hazard identification and assessment of existing conditions
 - Electrical hazard verification and control
 - Training and information
 - Electrical safety program
- Corrective actions address violations
- EM administered contract fee reduction of \$1.2 million (cited as remedy in lieu of civil penalty)



Washington Closure Hanford

Employee Catwalk Fall





Washington Closure Hanford

Employee Catwalk Fall



- Worker fall from a catwalk at 50 feet resulting in broken bones in both legs, cracked vertebrae, and multiple contusions
- Type B accident investigation by DOE
- PNOV issued August 19, 2010
 - Fall protection and ladder safety
 - General requirements and construction safety requirements
- Corrective actions address violations
- EM administered contract fee reduction of \$1.7 million (cited as remedy in lieu of civil penalty)



Savannah River Nuclear Solutions



Nitric Acid Spill and Electrical Arc





Savannah River Nuclear Solutions



Nitric Acid Spill and Electrical Arc

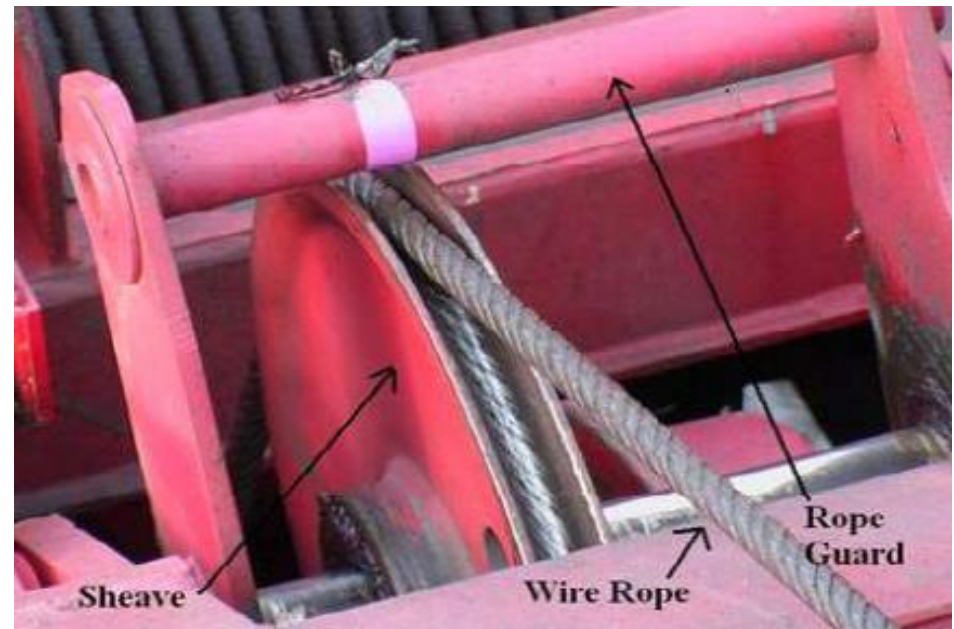
- Nitric acid spill injured five workers, four with acid burns
- Electrical arc in an energized 480 volt circuit breaker resulting in first, second, and third degree burns to a worker
- DOE Type B accident investigation of electrical arc event
- PNOV issued October 7, 2010
 - Hazard identification
 - Hazard prevention and abatement
 - Electrical power transmission and distribution operations
 - Personal protective equipment
 - Training
- Corrective actions address violations
- EM administered contract fee withholding of \$3.08 million (cited as remedy in lieu of civil penalty)



Parsons Infrastructure & Technology



Crane Wire Rope Lubrication – Hand Injury





Parsons Infrastructure & Technology



Crane Wire Rope Lubrication – Hand Injury

- Salt Waste Processing Facility - hand swabbing lubrication of a crane's moving wire rope resulted in the loss of three fingers
- PNOV issued October 7, 2010
 - Hazard assessment and abatement
 - Training and information
- Corrective actions address violations
- \$70,000 civil penalty with mitigation (50%) for timely response, self-critical evaluation and extensive corrective action



Los Alamos National Security

Worker Electrical Shock



- Non-electrical worker contact with 3500 VDC fireset in trainer device
- Work planned and conducted as non-electrical
- Electrical subject matter experts excluded from work planning and control process
- NNSA issued PNOV on October 18, 2010, with mitigated civil penalty of \$131,250
 - Electrical hazard identification and assessment
 - Electrical hazard prevention and abatement
 - Training and information
 - Electrical safety program
- Cited violations of Part 851, 1910 Subpart S, and NFPA 70E



Lawrence Livermore National Security

Chronic Beryllium Disease Prevention Program Deficiencies



- Events and conditions from 2007-2010 indicating deficiencies in the implementation of LLNL's CBDPP (Part 850)
- HS-41 investigation in April 2009; Investigation Report issued in July 2009
- NNSA and HS-40 issued a Consent Order on October 29, 2010, with remedy of \$200,000 and several terms and conditions:
 - Timely and effective completion of corrective actions
 - Confirm corrective actions address potential violations of Part 850 in Investigation Report
 - Quarterly updates on corrective action implementation status
 - NNSA/HS-40 validation of LLNS corrective actions



National Security Technologies

Flash Fire



- Flash fire at fire station
- Multi-contractor work activity
- NSTec led root cause analysis
- Office of Enforcement issued an Enforcement Letter on December 23, 2010 citing potential violations of Part 851
 - Construction safety (Appendix A to Part 851)
 - Hazard identification and abatement
 - Training and information
- Corrective actions address root causes and potential violations
- Letter includes recommendations for additional controls
 - Flowdown of company requirements to subcontractors
 - Review subcontractor safety and health plans
 - Evaluate skill-of-the-craft provisions



Lessons Learned from Enforcement Activities



- Ensure work is performed within the defined scope
- Clarify to workers the hazards and controls associated with their assigned tasks – don't rely exclusively on skill-of-the-craft
- Engage SME's in work planning and control
- Use assessments to identify noncompliances before they result in events and worker injury/illness
- Electrical safety deficiencies = NFPA 70E noncompliances
- Effectively address causal factors to prevent recurrence



Checklist of Takeaways



- ✓ Drive regulatory performance and enforcement discretion by self-identifying (and reporting) noncompliances, including programmatic and repetitive issues
- ✓ Timely, comprehensive, and self-critical evaluation of events – and identify applicable regulatory requirements
- ✓ Ensure corrective actions address noncompliances
- ✓ Maintain communications with HS-40 through DOE site office



Current Activities



- Investigations
 - CWI and URS - Hydraulic Telescoping Gantry System dropped shield door at Idaho National Laboratory/Integrated Waste Treatment Unit
 - Los Alamos National Security, LLC – Electrical events at Los Alamos National Laboratory
- Regulatory Assistance Reviews
 - B&W Y-12 (Y-12 site)
 - Washington TRU Solutions (Waste Isolation Pilot Plant)



Worker Safety and Health Enforcement Program Update



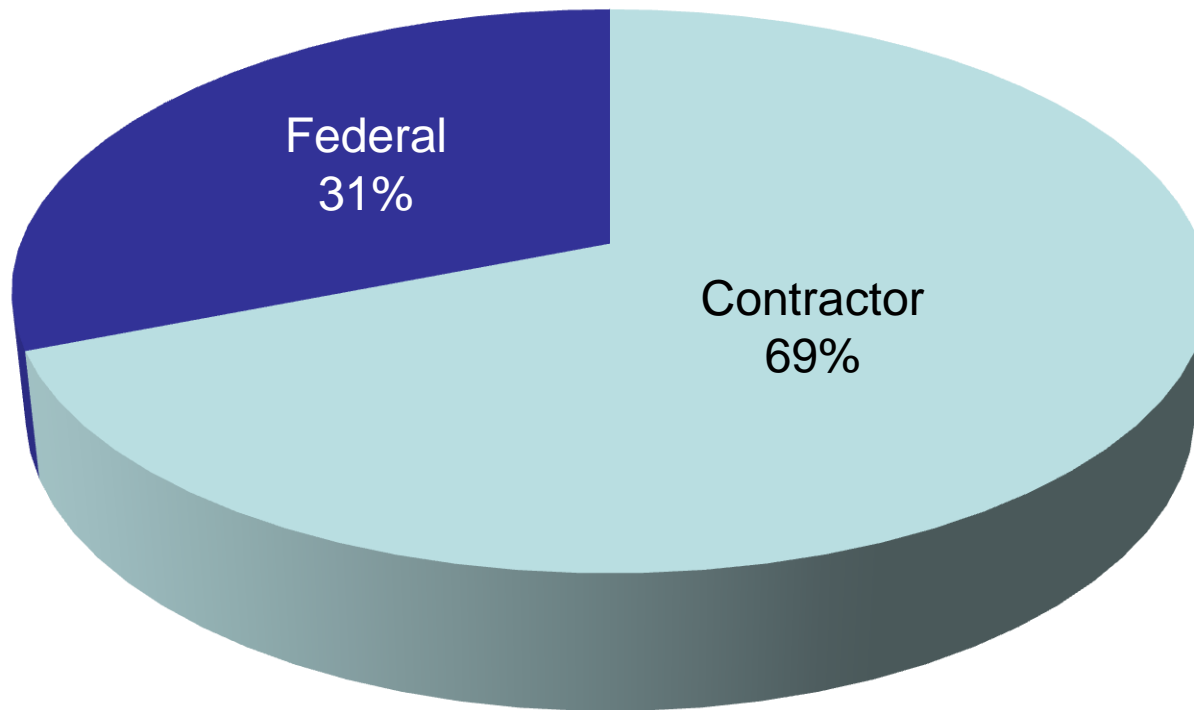
- Part 851 Civil Penalty = \$75,000 per Severity Level I violation effective January 13, 2010
- Pacific Underground Construction appeal
- Requests for investigation of safety violations
- Safety directives reform –
 - Explosives Safety Manual (2006 version invoked by Part 851)
 - ES&H Reporting Manual (2004 version invoked by Part 851)
 - Occurrence Reporting and Processing System Order – impacts on Noncompliance Tracking System reporting
- Regulatory Assistance Reviews



Results of the 2010 *Enforcement Process Overview Survey*

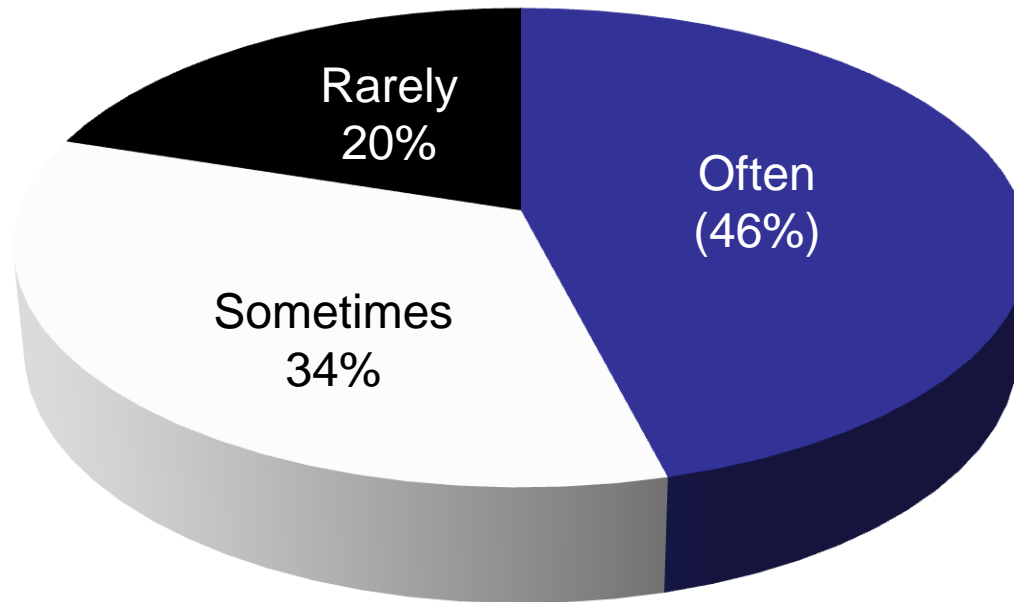


Enforcement Coordinator Affiliation





Frequency of Use of DOE Enforcement Process Overview (EPO)





Useful Aspects of the EPO

- Well organized and reader friendly reference for enforcement coordinators, appendices especially
- Provides details regarding enforcement processes and DOE expectations

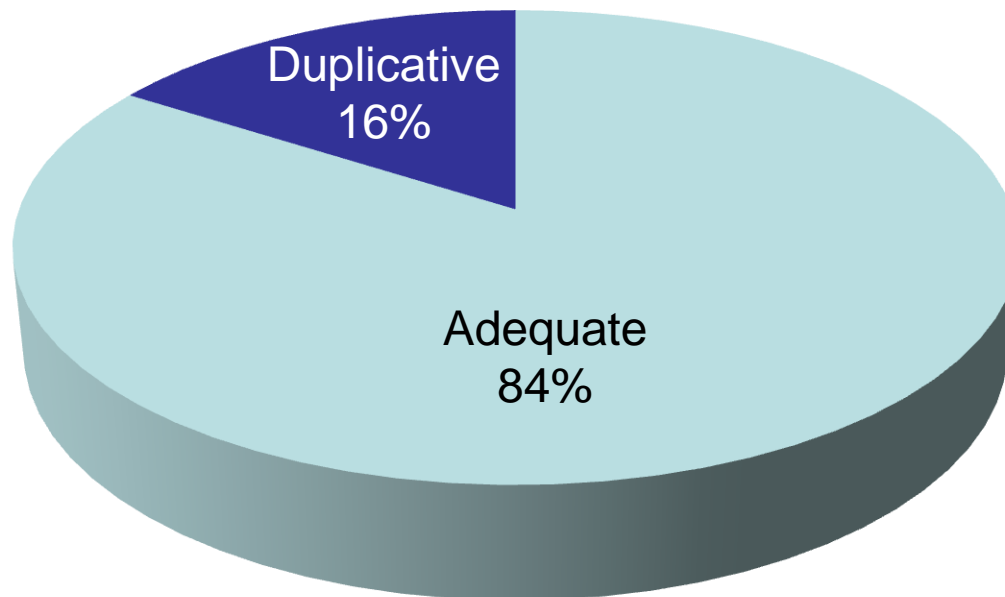


Least Useful Aspects of the EPO

- Program Review section
- Document format (length, portrait vs. landscape, not using tracked changes for edits)



EPO Level of Detail





Suggested Improvements

- Change to portrait orientation
- Provide tracked changes when revisions are made
- Consider hyperlinks
- Add Enforcement Guidance Supplements
- Clarify expectations and criteria for Consent Orders, civil penalties, fee reductions, and assistance visits



Questions?